

### *Status of the Claims*

The listing of claims will replace all prior versions, and listings of claims in the application.

1. (currently amended)      A CaF<sub>2</sub> cube comprising:  
    an uncoated CaF<sub>2</sub> prism;  
    a coated CaF<sub>2</sub> prism coupled to said uncoated CaF<sub>2</sub> prism, the coated CaF<sub>2</sub> prism including,  
        a first coating section having a multi-layered coating, and  
        a second coating section formed on top of said first coating section, said second coating section having a contact layer coating,  
        wherein the CaF<sub>2</sub> cube transmits deep ultra violet or vacuum ultra violet wavelengths of light substantially without absorption.
2. (currently amended)      The CaF<sub>2</sub> cube of claim 1, wherein said contact layer coating is a SiO<sub>2</sub> coating.
3. (currently amended)      The CaF<sub>2</sub> cube of claim 1, wherein said contact layer coating is a fused silica coating.
4. (currently amended)      The CaF<sub>2</sub> cube of claim 1, wherein the CaF<sub>2</sub> cube is a polarizing cube.
5. (currently amended)      The CaF<sub>2</sub> cube of claim 1, wherein the CaF<sub>2</sub> cube is a beam splitter.

6. (currently amended)      ~~An~~ A CaF<sub>2</sub> optical device comprising:  
    ~~an~~ a uncoated CaF<sub>2</sub> optical element;  
    a coated CaF<sub>2</sub> optical element coupled to a surface of said uncoated CaF<sub>2</sub>  
optical element, the coated CaF<sub>2</sub> optical element including,  
    a multi-layered coating formed on said surface, and  
    a contact layer coating formed on said multi-layered coating,  
    wherein the CaF<sub>2</sub> optical device transmits deep ultra violet or vacuum  
ultra violet wavelengths of light substantially without absorption.
7. (currently amended)      The CaF<sub>2</sub> optical device of claim 6, wherein said  
contact layer coating is a SiO<sub>2</sub> coating.
8. (currently amended)      The CaF<sub>2</sub> optical device of claim 6, wherein said  
contact layer coating is a fused silica coating.
9. (currently amended)      The CaF<sub>2</sub> optical device of claim 6, wherein said  
uncoated and said coated CaF<sub>2</sub> optical elements are prisms.
10. (currently amended)      The CaF<sub>2</sub> optical device of claim 6, wherein said  
uncoated CaF<sub>2</sub> optical element and said coated CaF<sub>2</sub> optical element are coupled together  
to form a polarizing cube.
11. (currently amended)      The CaF<sub>2</sub> optical device of claim 6, wherein said  
uncoated CaF<sub>2</sub> optical element and said coated CaF<sub>2</sub> optical element are coupled together  
to form a beam splitter.
12. (new) The CaF<sub>2</sub> cube of claim 1, wherein the wavelength of light is about  
157 nm, which is transmitted through the CaF<sub>2</sub> cube substantially without absorption.

13. (new) The  $\text{CaF}_2$  optical device of claim 6, wherein the wavelength of light is about 157 nm, which is transmitted through the  $\text{CaF}_2$  optical device substantially without absorption.